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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/450,680 11/30/99 MARUMO

M 35,62504

005514 MM91/1004  
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NEW YORK NY 10112

EXAMINER

RAO, S

ART UNIT

PAPER NUMBER

2814

DATE MAILED:

10/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/450,680	MARUMO, MITSUJI	
	Examiner	Art Unit	
	Steven H. Rao	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 March 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claims 1-20 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- |   |  |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 20) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-18 are , drawn to an apparatus for processing cassettes, classified in class 355, subclass 73.
- II. Claims 19 –20 ,are drawn to a method of semiconductor manufacturing , classified in class 438, subclass 108.

Inventions Group I and II are related as process and apparatus for its practice.

The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case The method (process) is not limited to manufacturing steps that can be practiced in the mini-environment pod device only. The recited process can be carried out in a materially different apparatus for e.g. an tube furnace apparatus, etc.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Attorney Steven E. Warren @ (202) 530-1010 on April 18, 2001 a provisional election was made without traverse to prosecute the invention of Group I , claims1-18. Affirmation of this election must be made by applicant in replying to this Office action.

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Claims 19-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' admitted prior art (AAPR) and Akagawa (U.S. Patent No. 4,856,904, herein after Akagawa).

With respect to claim 1, AAPR describes a mini-environment pod device for micro-device manufacturing apparatus, including :

A cassette capable of holding a plurality of wafers ( fig. 10 # 2,3 specification page 1 lines 13-14) ; a pod ( fig. 10 # 101, spec. page 1 line 10) providing an inner space to store the cassette ( Fig. 10 # 100, spec. page 2 line 8) .

AAPR does not specifically state that the pod has a includes an electromagnetic shield .

However, Akagawa in fig. 2 describes # 46 and 47 electromagnetic shield materials in the walls of housing 32, col. 2 line 64 and col.6 lines 64-68 to reduce the electromagnetic leakage (Akagawa col. 6 lines 62-68).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute Akagawa's shielded materials in the housing walls for AAPR's shield materials in unspecified location to reduce the electromagnetic leakage (Akagawa col. 6 lines 62-68).

a lid that fits into an opening of the pod ( spec. page 2 lines 29- page 3 lines 12) thereby forming an isolated environment in the inner space ( Fig. 10 # 100, spec. page 2 line 8).

With respect to claims 2 and 3 , the pod having a front opening or bottom opening ( AAPR spec. page 2 lines 29-page 3 lines 12).

With respect to claims 4, the device further including a conductive element in a conductive relationship with the electromagnetic shield ( AAPR spec. page 3 , line 19) ; w.r.t. claim 5 wherein the electromagnetic shield is a wire mesh ( AAPR spec. page 3 lines 21-22) ; w.r.t. claim 6 wherein the electromagnetic shield is metal coatings . (AAPR –inherent in spec. page 3 lines 17-18 instead of the shielded metal covering , metal coatings can be used);

With respect to claim 7 the electromagnetic shield materials comprising shield materials provided in the walls.( See Akagawa in fig. 2 describes # 46 and 47 electromagnetic shield materials in the walls of housing 32, col. 2 line 64 and col.6 lines 64-68.

With respect to claim 8, the electromagnetic shield has shielding capacity of under 100 db ( uV) within frequencies of about 9 to 400 Mhz. The Akagawa patent describes an electromagnetic shield for electromagnetic shielding i.e. for all

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wavelengths and frequencies. Therefore with a showing of criticality or unexpected results the recited range is obvious in view of the previously recited overlapping range.

With respect to claim 9, it recites the apparatus of claim 1 and additionally recites a processing system in the chamber ( AAPR page 3 lines 10-12 wherein the wafers are exposed) .

With respect to claim 10, the chamber having a grounded conductive portion ( Akagawa # 84, col. 11 9-11); (cl. 11) an optical system in the chamber ( AAPR page 1 line 16-17); ( cl. 12) kinematic couplings ( well known); ( cl. 13) front opening ( AAPR page 3 line 4-6) ; ( cl. 14) bottom opening type ( AAPR page 2 30-33); ( cl. 15) see claims 6 and 7 above; ( cl. 16) see claim 6 ; ( cl. 17) see claim 7; (cl. 18) see claim 8 above.

U.S. Patent No. 4,757,355 ( Iizuki et al.) is cited but not presently applied and describes a mask supplying chamber for semiconductor wafers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. Rao whose telephone number is 703-306-5945. The examiner can normally be reached on M-F, 8.00 to 5.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703- 306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703- 308-0956.



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September 29, 2001

Olik Chaudhuri  
Supervisory Patent Examiner  
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